

31, 35 and 38 remain in the application. Favorable reconsideration of the application is respectfully requested.

Claim 28, which was indicated as containing allowable subject matter, has been rewritten in independent form to include the limitations from amended claims 27 and 21 on which it depended. Claim 28 is now believed to be in condition for allowance.

It is believed that the amendments to the claims fully respond to the objections raised in the rejection under 35 U.S.C. §112, second paragraph. Accordingly, it is requested that the rejection be withdrawn.

The drawings were objected to on the grounds that the reference character "20" was used to designate both a "flat face" and a "hot face". It is respectfully submitted that the inconsistency was with the specification and not in the drawings. In the paragraph beginning on line 6 of page 12, the face 20 was described as being a substantially flat face. This language has been amended to refer to a "substantially flat hot face 20". The remainder of the specification calls the face 20 a hot face. Accordingly, withdrawal of the objection to the drawings is requested.

Applicant respectfully traverses the rejection of claims 1, 2, 4, 6, 7, 10-15, 18 and 19 under 35 U.S.C. §102(b) as being anticipated by Wade patent 5,438,813.

Wade relates to a method for attaching the cold side of an insulating material furnace lining block to a furnace wall using a threaded, headed metal fastener which is secured with a bolt to a member embedded in the block. The head of the fastener is welded to the furnace wall. Thus, this relates to fixing the cold side of the block to the furnace wall, not to fixing a protective element to the hot face of a furnace lining.

Wade initially uses a net 31 to compress together the modules of insulating material forming its block. After the block is attached to the furnace wall, the net 31 is cut to allow the insulation in the material to expand so that adjacent blocks are tightly packed together (see column 3, lines 9-13 and column 4, lines 40-43). Thus the net 31 is not a protective element as asserted in the office action. The net 31 does not protect the insulation block or modules, especially after they are installed and the net 31 is cut.

*partially
to say the
hot face
is covered
by the
net 31
the time
before
it is cut
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a protective
element*

Moreover, there is no element shown securing the net 31 to the block or modules.

Wade shows fastener elements including a stud 33, a ceramic ferrule 41 and a fastener 55, none of which is disclosed as or functions for securing the net 31 to the insulating material.

A person skilled in the art would clearly know that the technology required for securing a protective cover to the hot face of a refractory are different from those required to secure the refractory to the wall of a furnace. In the method disclosed in Wade for securing the insulating material to the interior wall of a furnace, it is necessary to pass a tool through a hole in the hot wall side of the block. If the Wade process were reversed for securing a protective element to the hot side of the insulating material, it would be necessary to have a hole through the furnace wall for passing a tool to secure a nut, which is not acceptable. There is no teaching in Wade as to any method for securing a protective coating to the hot side of an insulating material as required by applicant's claims.

It is respectfully submitted that the rejected claims are not anticipated by Wade, either in the form as filed or as amended. As stated above, the net 31 clearly is not a protective element and it is not secured to the insulating material with a securing means 33, 41 and 55. There is no connection between the elements 33, 41 and 55 and the net 31. Further, the net 31 is not in any manner a "protective element" as required by the claims. Once the insulating material is secured to the furnace wall, the net 31 is cut and serves no further function. As amended, all of the rejected claims require a protective element which at least partially covers the hot face of the insulating material. Further, Wade has no securing means which secures a protective element to the hot side of the insulating material as required by the claims. Nor do the elements 33, 41 and 55 secure the net 31 or any other element to the hot side of its insulating material. Since there is no such protective element and no structure for securing a protective element to the hot side of the insulating material disclosed in Wade, the claims are clearly not anticipated, the rejection is in error and should be withdrawn.

Applicant respectfully traverses the rejection of claims 21, 22, 24-27, 29-31 and 35 under 35 U.S.C. §102(b) as being anticipated by Wade patent 5,438,813.

Reference is made to the above discussion of the Wade patent. Wade only teaches the first step of the rejected claims, namely, the step of "attaching insulating material at or adjacent a wall of the furnace, the insulating material in use having a hot face which faces inwardly of the furnace and a cold face at or adjacent the furnace wall". There is no disclosure in Wade of the steps of embedding in the insulating material a member which cooperates with a securing means for attaching a protective element to at least partially cover the hot face of the insulating material. Without such a teaching, the claims both as filed and as amended are not anticipated by Wade. The rejection is based on an incorrect premise that the net 31 is a protective element and that the structure used to secure the insulating material to the furnace wall also secured the net 31 to the insulating material. Accordingly, withdrawal of the rejection is requested.

Applicant respectfully traverses the rejection of claims 3, 5, 16, 17 and 38 under 35 U.S.C. §103(a) as being unpatentable over Wade patent 5,438,813. These claims are all dependent on claim 1. It is submitted that claim 1 is neither anticipated by or obvious over Wade for the reasons discussed above. The only headed fastener in Wade is welded to the furnace wall and is not capable of securing a protective element to the hot face of the insulating material as required by claims 3 and 5. There is no protective element secured to the hot side of the insulating material in Wade, there is no protective element including a plurality of layers bonded together, and there is no disclosure of an adhesive cement securing a protective element in addition to a securing means as required in claims 16, and 17. Nor is there a protective element formed from a plurality of layers not bonded together as required by claim 38. Accordingly, the rejection is in error and should be withdrawn.

Applicant respectfully traverses the rejection of claims 8 and 9 under 35 U.S.C. §103(a) as being unpatentable over Wade patent 5,438,813 in view of European patent EP 0695923. Claims 8 and 9 are dependent on claim 1 and are believed patentable

over Wade for the reasons discussed above. The European patent does not cure the failures of Wade to teach the subject matter of claim 1. The European patent disclose ceramic plate like protective elements secured to the hot side of insulating material with headed, self-threading, refractory screws. The screw heads remain exposed to the interior of the furnace. However, neither Wade nor the European patent disclose securing the plate like protective elements on the hot side of the insulating material with a securing means which cooperates with a member which is embedded in the insulating material. Accordingly, the rejection should be withdrawn.

Applicant respectfully traverses the rejection of claim 23 under 35 U.S.C. §103(a) as being unpatentable over Wade patent 5,348,813. Claim 23 is dependent on claims 21 and 22 and is believed patentable over Wade for the reasons discussed above. Wade does not disclose securing any protective material to the hot side of its insulating material. Not does Wade disclose securing a protective member with a screw which engages a member embedded in the insulating material. The only disclosed use for the member embedded in the Wade insulating material is for securing the insulating material to a bolt which is welded to the furnace wall. Since different technologies have been used for securing insulating materials to furnace walls and for securing protective covers to the hot side of insulating materials which are secured to furnace walls, it would not be obvious to one skilled in the art to modify the teachings in Wade to obtain applicant's claimed method. Nor is there any suggestion in Wade of such modifications. Accordingly, it is submitted that claim 23 is patentable and that the rejection should be withdrawn.

It is believed that all issues raised in the official action have been fully responded to. If after consideration of the above amendments and comments, there remain any open issues in this application that possibly can be resolved by a telephone interview, applicant's undersigned attorney requests that he be called to discuss and try to resolve the issues.

Please extend the time for response to the July 17, 2002 office action by one month, or until November 17, 2002. A Petition For Extension Of Time Under 37 CFR 1.136(a) with fee payment instructions is enclosed.

In view of the above amendments and comments it is submitted that claims 1-19, 21-27, 29-31, 35 and 38 are in condition for allowance. Early and favorable action is solicited.

Respectfully submitted,

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Enclosures

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Attachment A

REPLACEMENT SPECIFICATION PARAGRAPHS - showing changes:

Page 12, beginning at line 6:

The modules 12 are typically made from a fibrous blanket of insulating material, such as an alumina/silicate based fibre, which is folded as indicated in figure 1 and compressed to shape and held by rods 18 which extend transversely to the folds, generally parallel to the furnace wall 11. The folds may be trimmed at the face remote from the furnace wall 11, to provide a substantially flat hot face 20 where a protective layer 26, is to be cemented to the fibres of the module 12. A fixing 14 may be embedded in the module 12 as the module 12 is made or subsequently. The folds are preferably arranged to extend transversely to the furnace wall 11.